Proposal

For

Second Year Project

Bachelor of Science in Information Technology

Dzongkha Proverbs

Submitted by

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Gyalpozhing College of Information Technology

Read carefully before filling the form.

1. Please do not alter the layout of the application form. Information must be filled in the spaces provided, under set format.
2. Guidance notes in various fields should not be deleted.
3. Required information should be duly filled in the specified fields.
4. Required heads/fields which are not relevant to the project should be marked **N/A** (Not Applicable) or left blank and should not be deleted.

Guidelines and Forms

Submission Procedure

Duly filled proposal forms completed in all respects should be submitted in form of soft copy and a hard copy to project guide and project coordinator. On receipt of the applications the proposals will be evaluated by reviewer panel and proposal would then be defended by student groups. The project group may need to revise the proposal in light of the evaluator's recommendations.

For further information, please contact:

Project Coordinator

Jigme Wangmo
jigmewangmo.gcit@rub.edu.bt

Tshering Lhamo
tsheringlhamo.gcit@rub.edu.bt

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Application for Final Year Project

1. Project Identification

A. Reference Number:	
(for office use only)	

B. Project Title:	
Dzongkha Proverbs	

C. Project Internal Guide:

Name:	Sonam Wangmo
Designation:	Associate Lecturer
Organization:	Gyalpozhing College of Information Technology
Mobile # :	17715831	Tel. # :
Email:	sonamwangmo.gcit@rub.edu.bt

C1. Project External Guide:

Name:	**NA**
Designation:	
Organization:	
Mobile # :	Tel. # :
Email:	

C2. Student Group Lead:

Name:	Karma Yangzom
Roll No:	12190058
Department:	Bachelor of Science in Information Technology
Mobile # :	17444562	Tel. # :
Email:	12190058.gcit@rub.edu.bt

D. **Organizations Involved in the Project:**

(Please identify all affiliated organizations collaborating in the project, and describe their role/contribution to the project.)

D1.   Industrial Organizations:

#	Organization Name	Role / Contribution
	NA	

D2.   Academic Organizations:

#	Organization Name	Role / Contribution

D3.   Funding Organizations:

#	Organization Name	Role / Contribution
	NA	

E. **Key Words:**

(Please provide a maximum of 5 key words that describe the project. The key words will be incorporated in our database.)

Dzongkha Proverbs, Sayings and Meanings

F. Research and Development Theme:

To develop a platform for the purpose of accessing and learning Dzongkha proverbs with its meanings. This app will help in promoting and preserving Dzongkha language through the proverbs and its meaning provided in the app.

G. Project Status:

(Please mark ☑)

☑ New   Modification to previous Project

Extension of existing project

- **Project Duration:**

Expected Starting Date:	9 February, 2021
Planned Duration in months:	4 months

2. Scope, Introduction and Background of the Project

A. Scope of the Project:

System Scope

Dzongkha Proverbs is an android application which will include the following features:

1. Proverbs (རྫོང་ཁ་གཏམ་དཔེ།): User can view all the Dzongkha proverbs and its meaning listed in the application.
2. Favourite (རྫོང་ཁ་གཏམ་དགའ་ཤོས།): User can set the Dzongkha proverbs they like as favourite and view it in this section. User can also remove the proverbs from favourite section.
3. Copy: User can copy the Dzongkha proverbs.
4. Share: User can share the Dzongkha proverbs to other platforms.
5. Search: Allows the user to search for the Dzongkha proverb of their choice.

Future Scope

Add Proverb: In this section, user can create their own Dzongkha proverbs and add it to collection of the proverbs in the application.

User Scope

Dzongkha Proverbs is an android mobile application which targets the Bhutanese people who wants to know and learn Dzongkha proverbs easily.

B. Introduction (Project Background and Literature Review, Current State of the Art):

(Detailed summary of what all has been done internationally in the proposed area quoting references and bibliography. Please note that this section demonstrates the depth of knowledge of the project team and builds the confidence of the evaluators about capability of the team in achieving the stated objectives.) 3
(Please describe the current state of the art specific to this research topic.)

Project Background

In today's world of connectedness, the use of smartphones has increased over the decades. With the creation of different smartphones, comes the demand for more mobile applications. The mobile applications changes the way of communication, socialization, work and recreation through the mobile phones. It makes everything much easier than before. Almost everyone knows how to use all these latest phones and the applications within it, and studies have shown that mobile technologies help in language learning (Norton, 2014).

Dzongkha was declared as the national language of Bhutan in 1971. But, today after five decades, Bhutanese in general are still facing difficulties in mastering the Dzongkha language. Learning and knowing more about Dzongkha proverbs is to be mentioned from among many ways to learn about Dzongkha language. Proverbs play an important role in language learning as a part of gaining cultural knowledge, metaphorical understanding and communicative competence. Proverbs can be used to embellish writings and speeches, to educate and give advices. Hence, with the development of "Dzongkha Proverbs", the users will have a better chance at learning proverbs in Dzongkha easily.

This mobile app will help the users to easily access Dzongkha proverbs and its meaning using a single platform. It will also help the users to know when to use the Dzongkha proverbs according to the situation. The users can set the proverbs they like as favourite and view them in favourite section. The users can also copy and share the proverbs in different platforms. Therefore, this app will mainly focus on delivering Dzongkha proverbs with its meaning, thereby promoting and preserving Dzongkha language and Bhutanese culture.

Literature Review

App Review

Proverbs and Sayings

Proverbs and Sayings is an app by appigrdev which provides users with collection of English proverbs with their meanings. The proverbs in the app are arranged in alphabetical order and the proverbs are also placed in category wise. The categories that are included are love, wisdom, life, funny and famous. The app also have favorite feature in which it allows the users to put the proverbs they like as favorite and view it directly from the favorite section. There is easy searching and sharing of proverbs feature in this app. In this app, the users can add proverbs which aren't available and also edit those proverbs which are added by them. So, this app helps to learn the English proverbs with its meaning easily.

Hausa Proverbs and Meaning

Hausa Proverbs and Meaning is an android app in which proverbs of Nigerian Hausa language are provided. It has been developed by Mplgmg. All the original Hausa proverbs and its meaning are translated in English in this app so that any non-Hausa speaker can understand the proverb very easily. This app gives the features such as setting the proverbs as their favorite, copying the proverbs and allows sharing the proverbs in different apps.

Current State of the Art

Currently, there is no such platform or app for the sole purpose to access and learn Dzongkha proverbs. In order to access Dzongkha proverbs, the Bhutanese people have to go through books, research papers and search online which is difficult and time consuming. Hence, by developing this mobile app, it will help the users to easily access the Dzongkha proverbs with its meanings from a single app without having to search from different sources. It will also assist to enhance the user's ability to use the proverbs according to the situation in which they are.

C. **Challenges:**

(Please describe the challenges, specific to this research topic, currently being faced internationally.)

Performance: Making the app interactive and responsive would be one of the challenging jobs.

Compatibility: To make the app run well on older platform versions.

Security issues: Security issues can be a concern while developing an application.

D. **Motivation and Need:**

(Please describe the motivation and need for this work.)

Due to the development of our country, Dzongkha is given less priority than any other languages today. Dzongkha language is hardly spoken and written in a proper way by the Bhutanese in which it is said that Dzongkha language is at the edge of extinction. Also, there is no application developed for sole purpose of learning Dzongkha proverbs and its meaning. It is also difficult to get the Dzongkha proverbs and its meaning from a single source to use for different purpose. So, the main motive towards the development of this app is to mainly access and enhance learning of Dzongkha proverbs from a single app.

3.   Aim and Objectives of the Project

(Please write the actual aim of your project. Also, describe the measurable objectives of the project and define the expected results. Use results-oriented wording with verbs such as 'to develop..', 'to implement..', 'to research..', 'to determine..', 'to identify..' The objectives should not be statements and should not include explanations and benefits. The objective should actually specify in simple words what the project team intends to achieve (something concrete and measurable/ deliverable). Fill only those objectives that are applicable to the proposed project.)

Aim:

To develop a convenient platform to access and learn Dzongkha proverbs with its meanings.

Objectives:

- To provide easy accessibility and learning of Dzongkha proverbs and its meanings.
- To make users understand on where the particular proverb is applicable to use.
- To enable users to become more competent in Dzongkha.
- To provide flexibility where the user can use the app without internet connectivity.

4. Methodology

A. Development / Research / Test Methodology:

(Please describe the technical details and justification of your development and research plan and test plan and testing strategies. Identify specialized equipment, facilities and infrastructure which are required for the project and their utilization plan. The block diagrams, system flow charts, high level algorithm details etc. have to be provided in this section. Also, describe the overall methodology to be used for the particular research topic)

For the development of the "Dzongkha Proverbs" android mobile app, Agile Model will be used.

These are the following actions that will be included:

Planning

In this phase, the overall idea and problems of the project will be discussed.

Requirement gathering and analysis

The requirements will be gathered through many ways such as previous research papers and book. After the requirement gathering is done, the problems will be studied in more detail. Then, the requirements will be documented in SRS (Software Requirement Specification) document.

Design

The design of the project will be prepared from the requirements specified in the previous phase. The design will include the prototype, UML diagrams and database design.

Implementation/Coding

With inputs from design phase, the implementation of the project will start.

Testing

After the development, the product will be tested using various types of testing method. If any functionality doesn't work properly, it can always go back and verify from the previous phase.
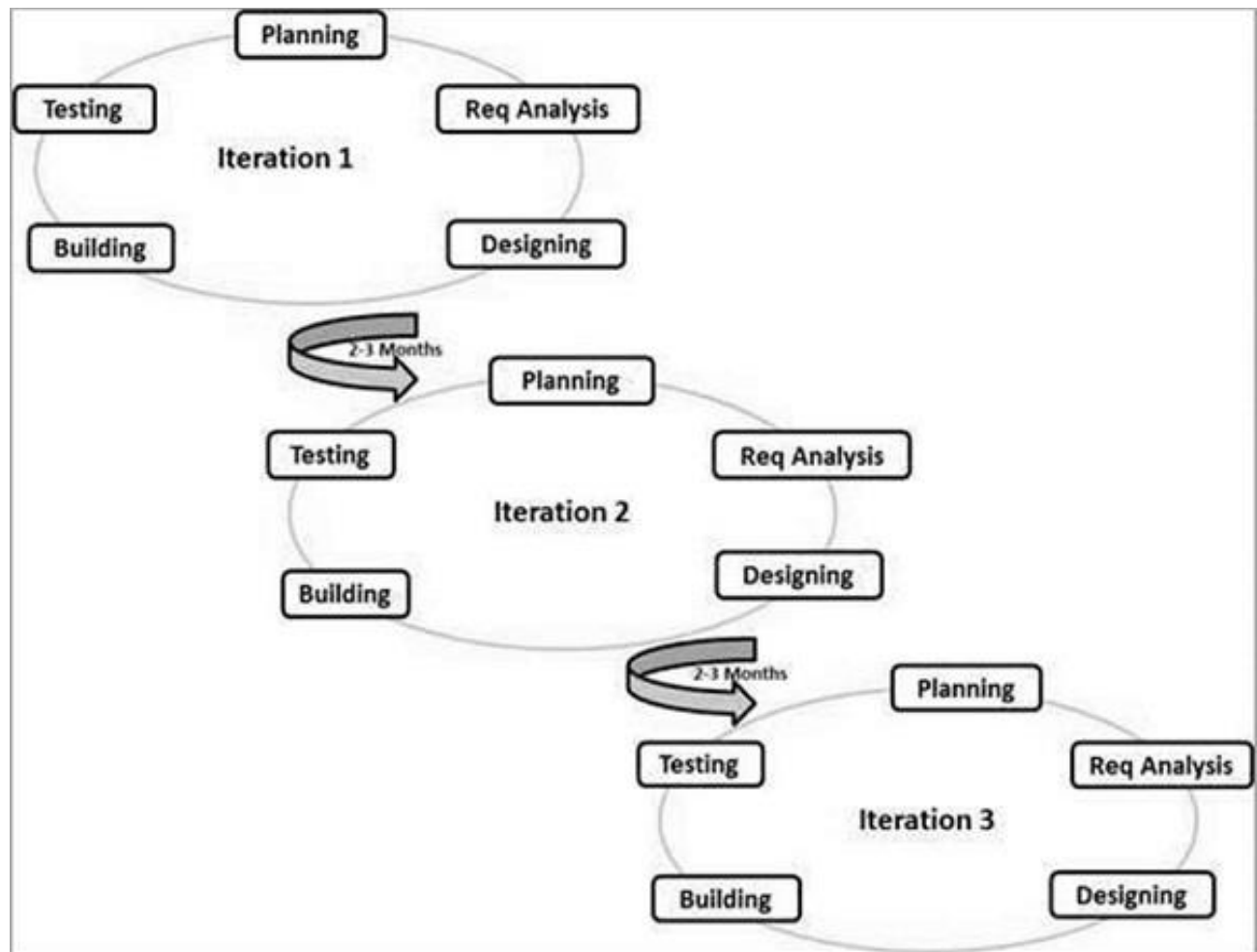
Agile model is a combination of iterative and incremental process models with focus on process adaptability by rapid delivery of working software product. It breaks the product into small incremental builds. These builds are provided in iterations. It encourages flexible responses to change.

The reasons for choosing Agile model for developing the app are:

- Small projects can be implemented very quickly.

- Errors can be fixed in the middle of the project.

- Flexible since requirements can be easily changed.

- Functionality can be developed rapidly and demonstrated.

1. Project Team:

Title / Position	Number
Project Internal Guide Ms. Sonam Wangmo	17715831
Project External Guide	
Student Team Members 12190058 Karma Yangzom	17444562
Others (please specify)	
Add more rows if required	

C. **Project Activities:**

(Please list and describe the main project activities, including those associated with the transfer of the research results to customers/beneficiaries. The timing and duration of research activities are to be shown in the Gantt chart in Section 8.)

1. **Installation of software and tools:**

Installation of Android Studio, Java Development Kit and database server for the development of the app.

2. **Gathering requirements:**

Collecting all required information about the app from various means such as referring from books and video tutorials.

3. **Design phase:**

This phase is fully committed for designing user interface (prototype), database design and familiarizing the functionalities of the system which will include understanding of how the control flows.

4. **Development phase:**

The development of the app begins here with coding using android framework.

5. **Testing Phase:**

After the development of the app, the product will undergo various testing methods.

6. **Final Documentation:**

After all the phases are completed, the documentation and final report of the project will be prepared.

D. Key Milestones and Deliverables:

(Please list and describe the principal milestones and associated deliverables of the project. A key milestone is reached when a significant phase in the project is concluded, e.g. selection and simulation of algorithms, completion of architectural design and design documents, commissioning of equipment, completion of test, etc.) The timing of milestones is also to be shown in the Gantt chart in Section 8.

No.	Elapsed time from start (in months) of the project	Milestone	Deliverables
1	09/02/2021-23/02/2021	Topic selection	Confirmation of project topic
2	24/02/2021-14/03/2021	Problem statement, Literature review, Brainstorming and Feasibility study	Project proposal
3	15/03/2021-25/03/2021	Requirement gathering and analysis	Documenting SRS document
4	26/03/2021-30/03/2021	Software Installation	Setting environment for development.
5	31/03/2021-12/04/2021	Design	User Interface design (Prototype), ER diagram, Architectural diagram
6	13/04/2021-1/05/2021	Implementation/Coding	Source code and functional features implemented
7	2/05/2021-15/05/2021	Testing	Test case
8	16/05/2021-22/05/2021	Final documentation	Final Report Presentation

5. Benefits of the Project (Expected output/outcomes):

Benefits:

- Provides a convenient android app to access and learn Dzongkha proverbs with its meaning.
- Minimizes the use of multiple sources to get Dzongkha proverbs.
- Helps in promotion and preservation of Dzongkha and Bhutanese culture.
- Offline-based app where it can be access from anywhere.

6. Risk Analysis/Feasibility

A. Risks of the Project:

(Please describe the factors that may cause delays in, or prevent implementation of, the project as proposed above; estimate the degree of risk.)

(Please mark ☑ where applicable)   Low   Medium   High

Technical risk   ☑

Timing risk   ☑

Budget risk   -

A1. Comments(Describe the risk):

Technical risk: There is medium technical risk since the technology needed to develop the app is not available. There is also high chance of hardware failure which causes crashing of the system.

Timing risk: There is a medium risk as time needs to be spend on learning android development.

Budget risk: This project does not have budget risk as it can use the free software which is available to develop the app.

Feasibility Study

From reviewed literature (app review), there are many android apps developed for learning proverbs. Among those apps developed, one of them is for English proverbs and one is developed based on their country's language and translated in English. Although there are lot of apps for proverbs, Dzongkha proverbs are not mentioned in any of the apps developed till now. Since, many apps are developed based on learning proverbs, it can be reviewed to develop a similar platform from where the Bhutanese people can access and learn Dzongkha proverbs. Therefore, it is found that Dzongkha Proverbs app is feasible.

7. Project Approval Certificate

(Approval of Project Proposal by the Competent Authority (Department Chairman) and Project Review Team is mandatory before the start of project execution.)

Project Review Team:

SI #   Name   Signature

(Please add more rows if required.)

Project Coordinator

Name:

Designation:

Email:

Date: Signature:

Competent Authority – Head of Department

Name:

Designation:

Email:

Date: Signature

& stamp:

## 8.   Reviewers Panel Comments

10. Project Schedule / Milestone Chart /Work plan

(Project schedule using MS-Project (or similar tools) with all tasks, deliverables, milestones, clearly indicated are preferred. Task should be measured in terms of hours)

Table 1: Project schedule

Task Name	Start	Finish	Days
Topic selection	9-Feb	23-Feb	15
Problem statement, Literature review, Brainstroming & Feasibility study	24-Feb	14-Mar	19
Requirement gathering and analysis	15-Mar	25-Mar	10
Software Installation	26-Mar	30-Mar	5
Design	31-Mar	12-Apr	13
Implementation/Coding	13-Apr	1-May	18
Testing	2-May	15-May	14
Final Documentation	16-May	22-May	7

Fig 1.1: Gantt chart
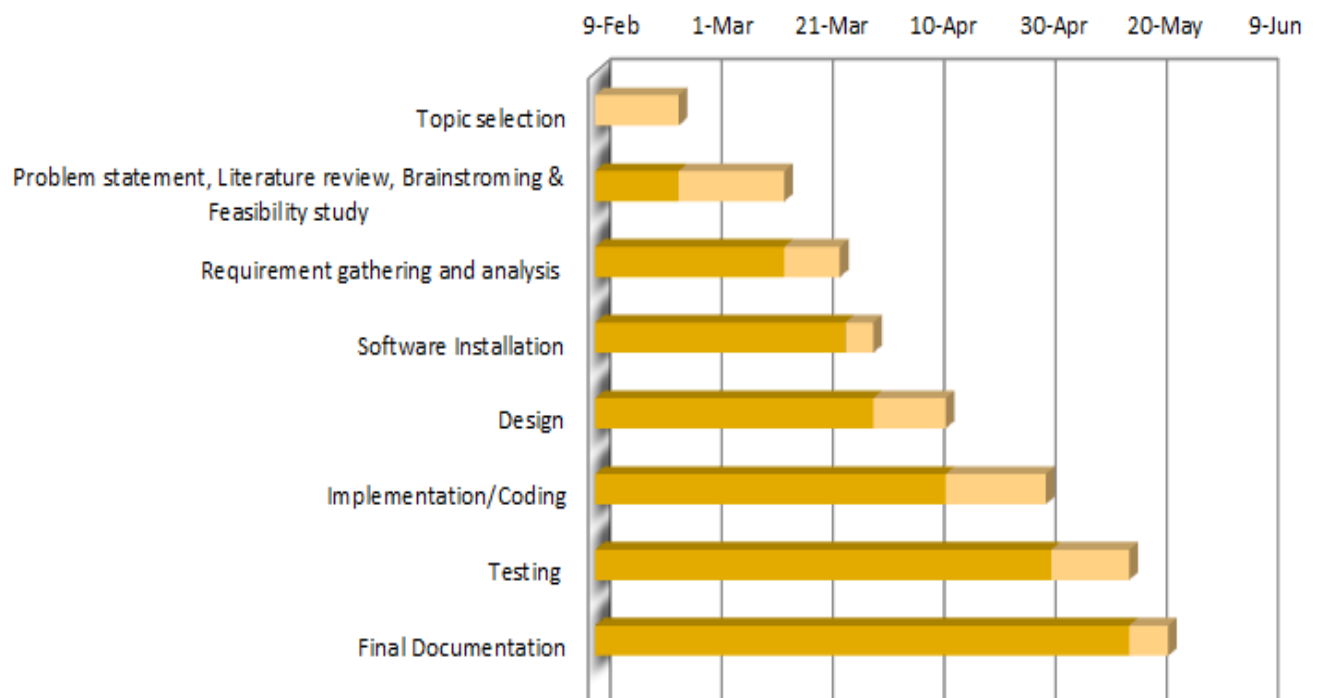
13. Report Writing Guidelines

(Project report will be written under the specified guidelines.)

Bibliography

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